

## REMARKS

Claims 1-2, 5, 8-13, 16-21, 23-27, and 29-32 are pending in this response. Claims 21, 23, 27 and 29 are amended without entering any new matter or raising any new issue.

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**Claims 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Rotzoll (U.S. Patent No. 5,737,035)**

10 Claim 21 is amended to incorporate all of the limitations of the previously presented claim 22, which is correspondingly cancelled in this response. Applicant asserts that the amended claim 21 is patentable over Rotzoll because Rotzoll at least fails to teach or suggest the following limitations: “a first local oscillator for providing an oscillating signal except for a differential signal to the first mixer, wherein the oscillating signal comprises a first reference signal and a second reference signal being the first reference  
15 signal phase shifted by 90 degrees”. According to the Office Action mailed 10/17/2006, Rotzoll discloses a mixer 408 corresponding to the first mixer of claim 21 and a phase splitter 611 outputting oscillating signals shifted by 90 degrees. However, Rotzoll fails to disclose that the oscillating signals outputted by the phase splitter 611 is provided to the mixer 408 while the first local oscillator of claim 21 provides the oscillating signal  
20 comprising the first and second reference signals to the first mixer. Since the splitter 611 of Rotzoll does not provide oscillating signals to the mixer 408, Rotzoll fails to disclose all of the limitations of the amended claim 21. Hence, claim 21 is patentable over Rotzoll. As claims 23 and 24 are dependent upon claim 21, if claim 21 is found to be allowable, so too should the dependent claims.

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**Claims 27, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Birleson (U.S. Patent No. 5,847,612)**

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Claim 27 is amended to incorporate all of the limitations of the allowable subject matter claim 28, and thereby in condition of allowance. As claims 29-32 are dependent upon claim 27, if claim 27 is found to be allowable, so too should the dependent claims.

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Consideration of pending claims 1-2, 5, 8-13, 16-21, 23-27, and 29-32 is respectfully requested.

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Sincerely yours,



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